AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF CLAIMS:

1. (original) Method in a digital communication system for transmitting a modulated bit stream comprising user data and dummy data, wherein the modulated user data is represented by symbols from a symbol alphabet M, the modulated dummy data is represented by a symbol $m_0$, the method is **characterised by** the steps of:

(a)- generating (601a) symbols $q_0,..,q_j$ randomly from a predefined symbol alphabet Q being a subset of the symbol alphabet M,

(b)- scrambling (602a) the bit stream by performing bitwise modulo-2 addition between the modulated bit stream and the randomly generated symbols $q_0,..,q_j$ from Q, and

(c)- transmitting (603a) said scrambled bit stream,

wherein the predefined symbol alphabet Q is defined so that the transmit power level of the dummy data is substantially lower than the transmit power level of the user data.

2. (original) Method in a digital communication system for

receiving a bit stream **characterised in** that the bit stream is transmitted and scrambled in accordance with claim 1, the method comprises the steps of:

(d)- generating (601b) symbols $q_0,..,q_j$ randomly from the symbol alphabet Q in synchronisation with the transmitter of the received bit stream, and

(e)- scrambling (602b) the received bit stream in order to recreate estimated message symbols from symbol alphabet M by performing bitwise modulo-2 addition between the received bit stream and the randomly generated symbols $q_0,..,q_j$ from Q.

3.(currently amended) Method according to ~~any of claims 1 and 2~~ claim 1, wherein the bit stream is modulated with Quadrature Amplitude Modulation (QAM).

4.(original) Method according to claim 3, wherein the QAM is 16-QAM.

5.(currently amended) Method according to ~~any of claims 1 or 4~~ claim 1, wherein Q comprises four message points $\{q_0, q_1, q_2, q_3\}$ representing signal vectors $\{s_0, s_1, s_2, s_3\}$, wherein the length of all of the signal vectors is equal, i.e., $\|s_0\| = \|s_1\| = \|s_2\| = \|s_3\|$ and the angle increments from $s_0$ to $s_1$, $s_1$ to $s_2$, $s_2$ to $s_3$ and $s_3$ to $s_0$ are 90 degrees.

6.(original) Method according to claim 5, wherein Q comprises the four innermost message points of the symbol alphabet M.

7.(currently amended) Method according to ~~any of previous claims~~ claim 1, wherein the randomly generated symbols from Q is generated by applying a pseudo-random binary sequence generator to a lookup table wherein the symbol alphabet Q and $m_0$ are stored.

8.(currently amended) Method according to ~~any of previous claims~~ claim 1, wherein the modulated dummy data $m_0$ is consistently represented by zeros or consistently represented by ones.

9.(currently amended) Method according to ~~any of previous claims 1-8~~ claim 1, wherein the method is applied on VDSL.

10.(currently amended) A computer program product directly loadable into the internal memory of a computer within a mobile station or a base station transceiver in a communication system, comprising the software code portions for performing the steps of ~~any of claims 1-9~~ claim 1.

11.(currently amended) A computer program product stored on a computer usable medium, comprising readable program for causing a computer, within a mobile station or a base

station transceiver in a communication system, to control an execution of the steps of ~~any of the claims 1-9~~ claim 1.

12.(original) Transmitter (400) in a digital communication system comprising means for transmitting a modulated bit stream comprising user data and dummy data, wherein the modulated user data is represented by symbols from a symbol alphabet M, the modulated dummy data is represented by a symbol $m_0$, **characterised by** means (401, 402) for generating symbols $q_0,..,q_j$ randomly from a predefined symbol alphabet Q being a subset of M, means for scrambling the bit stream by performing bitwise modulo-2 addition between the modulated bit stream and the randomly generated symbols $q_0,..,q_j$ from Q, and means for transmitting said scrambled bit stream, wherein the predefined symbol alphabet Q is defined so that the transmit power level of the dummy data is substantially lower than the transmit power level of the user data.

13.(original) Receiver (404) in a digital telecommunication system comprising means for receiving a bit stream **characterised in** that the bit stream is transmitted and scrambled by a transmitter in accordance with claim 10, the receiver further comprises means (405,406) for in synchronisation with the transmitter (400) of the received bit stream generating symbols $q_0,..,q_j$ randomly from the symbol alphabet Q, and means for scrambling the received bit

stream by performing bitwise modulo-2 addition between the received bit stream and the randomly generated symbols $q_0,..,q_j$ from Q in order to recreate estimated message symbols from symbol alphabet M.

14.(currently amended) Transmitter (400) according to claim 12 ~~or receiver (404) according to claim 13~~, wherein the bit stream is modulated with Quadrature Amplitude Modulation (QAM).

15.(currently amended) Transmitter (400) ~~or receiver (404)~~ according to claim 14, wherein the QAM is 16-QAM.

16.(currently amended) Transmitter (400) or receiver (404) according to ~~any of claims 12-15~~ claim 12, wherein Q comprises four message points $\{q_0, q_1, q_2, q_3\}$ representing signal vectors $\{s_0, s_1, s_2, s_3\}$, wherein the length of all of the signal vectors is equal, i.e., $\|s_0\| = \|s_1\| = \|s_2\| = \|s_3\|$ and the angle increments from $s_0$ to $s_1$, $s_1$ to $s_2$, $s_2$ to $s_3$ and $s_3$ to $s_0$ are 90 degrees.

17.(currently amended) Transmitter (400) ~~or receiver (404)~~ according to claim 16, wherein Q comprises the four innermost message points of the symbol alphabet M.

18.(currently amended) Transmitter (400) ~~or receiver (404)~~ according to ~~any of previous claims 12-17~~ claim 12, wherein the randomly generated symbols from Q is generated by applying a pseudo-random binary sequence generator (401;405) to a lookup table (402;406) wherein the symbol alphabet Q and $m_0$ are stored.

19.(currently amended) Transmitter (400) ~~or receiver (404)~~ according to ~~any of previous claims 12-18~~ claim 12, wherein the modulated dummy data $m_0$ is consistently represented by zeros or consistently represented by ones.

20.(currently amended) Transmitter (400) ~~or receiver (404)~~ according to ~~any of previous claims 12-19~~ claim 12, wherein the transmitter (400) or receiver (404) is applied on VDSL.

21.(currently amended) Transceiver in a digital communication system characterised in that it comprises the transmitter according to ~~any of claims 11,13-18 and the receiver according to any of claims 12-18~~ claim 12.

22.(new) Receiver according to claim 13, wherein the bit stream is modulated with Quadrature Amplitude Modulation (QAM).

23.(new) Receiver according to claim 22, wherein the QAM is 16-QAM.

24.(new) Receiver according to claim 13, wherein Q comprises four message points $\{q_0, q_1, q_2, q_3\}$ representing signal vectors $\{s_0, s_1, s_2, s_3\}$, wherein the length of all of the signal vectors is equal, i.e., $\|s_0\| = \|s_1\| = \|s_2\| = \|s_3\|$ and the angle increments from $s_0$ to $s_1$, $s_1$ to $s_2$, $s_2$ to $s_3$ and $s_3$ to $s_0$ are 90 degrees.

25.(new) Receiver according to claim 24, wherein Q comprises the four innermost message points of the symbol alphabet M.

26.(new) Receiver according to claim 13, wherein the randomly generated symbols from Q is generated by applying a pseudo-random binary sequence generator (401;405) to a lookup table (402;406) wherein the symbol alphabet Q and $m_0$ are stored.

27.(new) Receiver according to claim 13, wherein the modulated dummy data $m_0$ is consistently represented by zeros or consistently represented by ones.

28.(new) Receiver according to claim 13, wherein the transmitter (400) or receiver (404) is applied on VDSL.

29.(new) Transceiver in a digital communication system, characterized in that it comprises a receiver according to claim 13.